



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,985	12/30/2003	David B. Olson	59460US002	6610
32692	7590	10/26/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				BERNSHTEYN, MICHAEL
ART UNIT		PAPER NUMBER		
				1713

DATE MAILED: 10/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/747,985	OLSON ET AL.	
	Examiner	Art Unit	
	Michael Bernshteyn	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 September 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1, 6 and 13-33 is/are pending in the application.
 - 4a) Of the above claim(s) 21-25 and 27-29 is/are withdrawn from consideration.
- 5) Claim(s) 26, 32 and 33 is/are allowed.
- 6) Claim(s) 1, 6, 13-20, 30 and 31 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 December 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

1. This Office Action follows a response filed on September 26, 2006. Claims 13, 25 and the specification have been amended, claims 31-33 have been added.
2. The Declaration under 37 CFR 1.132 filed on September 26, 2006 is sufficient to overcome the rejection of claim 26 based upon 35 U.S.C. 103(a).
3. Claims 1, 6, 13-20, 26 and 31-33 are pending.

Claim Rejections - 35 USC § 103

4. The test of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.
5. Claims 1, 6, 14-20 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olson et al. (U.S. Patent 6,261,700) in view of Williams et al. (U.S. Patent 5,855,983), for the rationale recited in paragraph 5 of Office Action dated on August 30, 2006.
6. Claims 13 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olson et al. (U.S. Patent 6,261,700) in view of Williams et al. (U.S. Patent 5,855,983) as applied to claims 1, 6, 14-20 and 30 above, and further in view of Lu (U.S. Patent 5,183,597).

Olson discloses coatings; composite structures containing coatings, and compositions for preparing and methods of preparing coatings and composite structures, wherein the compositions comprise inorganic oxide particles and polymerizable brominated compounds, and coatings comprise inorganic oxide particles and a brominated polymer (abstract).

Olson discloses that the most preferable first monomer comprising a major portion of 2-propeonic acid, (1-methylethylidene)bis[(2,6,dibromo-4,1-phenylene)oxy(2-hydroxy-3,1-propanediyl)] ester as the reaction product **of tetrabromobisphenol A diglycidyl ether and (meth) acrylic acid** which is known under the trade designation ‘RDX-51027’ and used in the table 1, examples 1 and 3 (col.26, lines 18-55). This component is readable as component a) in the instant claim 13.

Examples of suitable multifunctional ester (meth)acrylates include poly(meth)acrylic acid esters of polyhydric alcohols including, for example, **tri(meth)acrylic acid esters of pentaerythritol**, etc. Particularly preferred multifunctional ester (meth)acrylic acids can comprise a mixture of di-, tri-, and tetra(meth)acrylate esters of **pentaerythritol** (col. 12, line 39 through col. 13, line 13). **Pentaerythritol tri(meth)acrylate** is readable as component b) in the instant claim 13.

With regard to the limitations of instant claim 13, Olson does not disclose a brightness enhancing film comprising a linear array of regular right prisms, wherein the prisms are prepared from the reaction product.

Williams discloses a flame resistant composite film includes the first layer and the second layer that are joined together. The first layer has a light transmission of at least 93% and is substantially constructed from a radiation-cured polymer and a flame retardant material. The second layer is constructed from thermoplastic polymer resin (abstract). With regard to the limitations of instant claims 1,13 and 30, Williams discloses that the brightness enhancement film 11 includes an array of prisms typified by prisms 22, 24, 26, and 28, as illustrated in FIG. 2. A linear array of regular right

prisms is preferred for both optical performance and ease of manufacture (col. 2, lines 49-59).

Both references are analogous art because they are from the same field of endeavor concerning new brightness enhancement film.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a linear array of regular right prisms as taught by Williams in Olson's brightness enhancing film, wherein the prisms are prepared from the reaction product because a linear array of regular right prisms is preferred for both optical performance and ease of manufacture (US'983, col. 2, lines 50-52), and thus to arrive at the subject matter of instant claim 13.

The combined teaching of Olson and Williams does not disclose the depositing the polymerizable compound onto a molding surface to fill cavities of the molding surface and curing the polymerizable composition between a preformed substrate and the molding surface.

Lu discloses a method for making the novel microstructure-bearing composite plastic article. The method comprises the following steps:

- a) preparing a one-part, solvent-free, radiation-polymerizable, crosslinkable, organic oligomeric resin composition having hard segments and soft segments;
- b) depositing a bead of the oligomeric resin composition along one edge of a master negative microstructure molding surface;
- c) covering the master with a preformed substrate, at least one of the master and the substrate being flexible;

- d) applying force progressively to the substrate to advance the bead of resin while applying sufficient pressure to fill the cavities of the master such that the deposited resin does not protrude beyond the cavities to more than 20% of the depth of the cavities;
- e) curing the deposited oligomeric resin by ultraviolet radiation to provide a composite of said substrate and cured oligomeric resin; and
- f) removing the resulting microstructure-bearing compositite of the substrate and cured resin (col. 3, lines 25-48).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the depositing the polymerizable compound onto a molding surface to fill cavities of the molding surface and curing the polymerizable composition between a preformed substrate and the molding surface as taught by Lu in Olson and Williams's brightness enhancing film, comprising a linear array of regular prisms in order to obtain the composite plastic article which is superior in flexibility and toughness to any replicated thermoplastic article now on the market (US'597, col. 2, lines 58-60), and thus to arrive at the subject matter of instant claims 13 and 31.

Allowable Subject Matter

7. Claims 26, 31 and 32 are allowed.
8. The following is an examiner's statement of reasons for allowance: The present claims are allowable over the closest references: Olson et al. (U.S. Patent 6,261,700).

Olson discloses coatings; composite structures containing coatings, and compositions for preparing and methods of preparing coatings and composite structures, wherein the compositions comprise inorganic oxide particles and polymerizable brominated compounds, and coatings comprise inorganic oxide particles and a brominated polymer (abstract).

However, Olson does not disclose or fairly suggest the instantly claimed solvent-free polymerizable composition.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael Bernshteyn
Patent Examiner
Art Unit 1713

MB
10/20/2006


DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700